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**Three New Genera and Six New Species of South American
Gyponine Leafhoppers (Homoptera: Cicadellidae)¹**

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ABSTRACT

Three closely related new genera (*Fuminana*, *Villosana* and *Barbatana*) of the subfamily Gyponinae and 6 new species (*Fuminana falcifera* n. sp., *F. abana* n. sp., *F. extata* n. sp., *Barbatana extera* n. sp., *B. falcata* n. sp. and *B. alaba* n. sp.), all from Venezuela, are described and illustrated.

INTRODUCTION

The 3 genera described in this paper are being separated from the very large and conglomerate genus *Scaris*, which, for many years, has contained all the very large round-headed gyponine leafhoppers (1, 2). The following key separates these genera.

KEY TO THE *SCARIS* COMPLEX

- 1. Metatibia with outer row of setae with several smaller setae between macrosetae *Scaris* Le Peletier and Serville
- 1'. Metatibia with outer row of setae containing only macrosetae 2
- 2. Male genital plates clothed with a large brush of hair-like setae (on undissected specimens plates not visible because of these hairs). Largest light spot on forewing in cell proximal to first crossvein 3
- 2'. Male genital plates normal, with only a few short setae (on undissected specimens plates easily seen). Largest creamy spot on fore-

- wing in cell between first and second crossvein (Fig. 10) *Fuminana* new genus
- 3. Head with distinct anterior margin, which is slightly upturned at apex (Fig. 4) *Villosana* new genus
- 3'. Head with indistinct anterior margin, which is not upturned (Fig. 7) *Barbatana* new genus

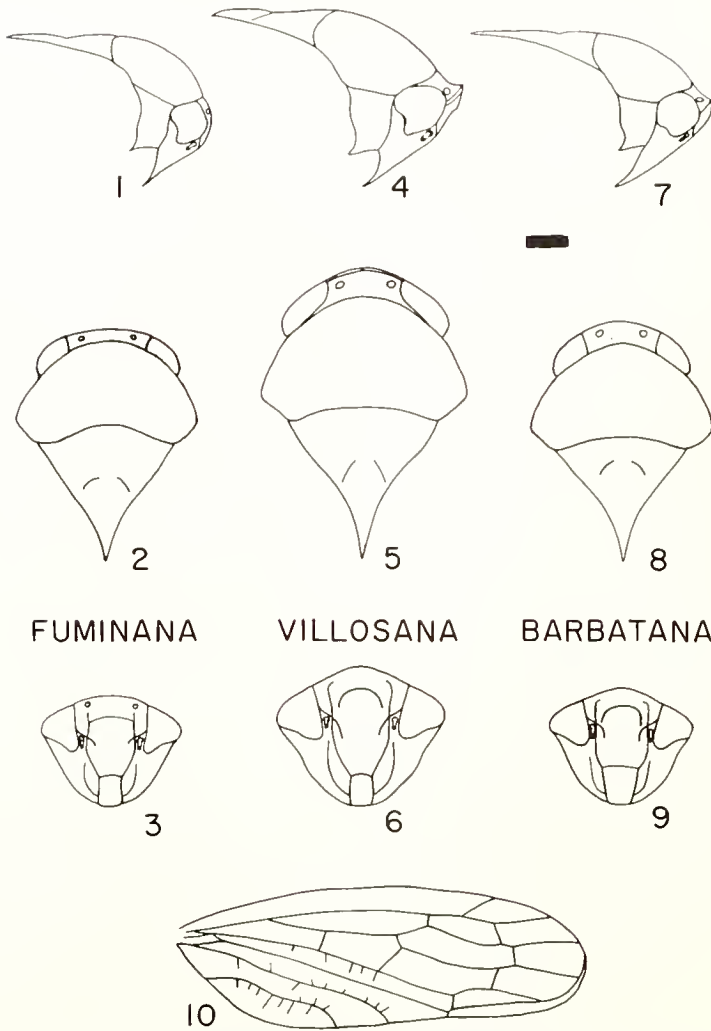
Genus *Fuminana* new genus

Head bulbous, margin of crown rounded to face (Figs. 1, 2). Pronotum wider than head, convexly rounded (head appears below pronotum). Forewing with normal venation, although a few incomplete crossveins mostly in claval area (Fig. 10). Body overall robust. Hind tibia with outer row of setae made up of only primary setae. Color brown to dark brown, with some small creamy spots in cells of forewing. Largest spot being between crossveins. Male genitalia usually with pygofer without processes; plates long; style with a subapical tooth or serrated edge; aedeagus tubular with a pair of small apical processes.

Type species: *Clinonaria ingula* DeLong and Freytag.

This genus is fairly easily separated from the other genera of the *Scaris* complex by its

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FUMINANA

VILLOSANA

BARBATANA

FIGS 1-10 External characteristics. *Fuminana falcifera* n. sp.: 1. Lateral view of head, pronotum and scutellum. 2. Dorsal view of head, pronotum and scutellum. 3. Face. *Villosana crina* (DeLong and Freytag): 4. Lateral view of head, pronotum and scutellum. 5. Dorsal view of head, pronotum and scutellum. 6. Face. *Barbatana falcata* n. sp.: 7. Lateral view of head, pronotum and scutellum. 8. Dorsal view of head, pronotum and scutellum. 9. Face. *Fuminana abana* n. sp.: 10. Forewing (showing largest spot). All drawn to the same scale, line equals 1 mm.

rather dark brown color and the largest of the creamy spots between the basal crossveins of the forewing. The male genital structures, of the species known so far, also appear to be very similar with a long tubular aedeagus with small apical processes, and a simple pygofer.

SPECIES OF *FUMINANA*

abana n. sp. Venezuela.

astra (DeLong and Freytag), 1969:167 (*Clinonaria*). Peru. New combination.

callida (DeLong and Freytag), 1969:176 (*Clinonaria*). Brazil. New combination.

conspicua (DeLong and Freytag), 1969:179 (*Clinonaria*). Peru. New combination.

curra (DeLong and Freytag), 1969:166 (*Clinonaria*). Bolivia, Peru. New combination.

extata n. sp. Venezuela.

falcifera n. sp. Venezuela.

ingula (DeLong and Freytag), 1969:166 (*Clinonaria*). Ecuador, Peru, Venezuela. New combination.

jaculum (DeLong and Freytag), 1969:164 (*Clinonaria*). Peru. New combination.

lira (DeLong and Freytag), 1969:167 (*Clinonaria*). Bolivia, Brazil, Ecuador, Paraguay, Peru. New combination.

marita (DeLong and Freytag), 1969:168 (*Clinonaria*). Brazil. New combination.

metra (Freytag and DeLong), 1982:6 (*Scaris*). Guyana. New combination.

saga (Freytag and DeLong), 1982:6 (*Scaris*). French Guiana. New combination.

scrosa (DeLong and Freytag), 1969:178 (*Clinonaria*). Bolivia, Peru. New combination.

setigera (DeLong and Freytag), 1969:179 (*Clinonaria*). Brazil. New combination.

setosa (DeLong and Freytag), 1969:172 (*Clinonaria*). Brazil. New combination.

signa (DeLong and Freytag), 1969:167 (*Clinonaria*). Bolivia. New combination.

superba (DeLong and Freytag), 1969:178 (*Clinonaria*). Peru. New combination.

taenia (Freytag and DeLong), 1982:7 (*Scaris*). Brazil. New combination.

Fuminana falcifera new species

(Figs. 1-3, 11-15, 41)

Length of male 12.8 mm; females 14-14.1 mm.

Similar to *curra* in size and shape. Crown broadly rounded to face, more than 3 times as wide between eyes as median length (Figs. 1-3).

Overall color brown, with many minute dark punctate spots, especially head and pronotum. Forewings dull rusty brown with pale creamy spots in cells, largest one almost rectangular and between basal crossveins.

Male genitalia: aedeagus tubular with a small diamond shaped, almost transparent, expansion at apex, and a small pair of subapical ventral processes (Figs. 11, 12). Style slender, curved laterad, pointed at apex, with a subapical tooth and fine serrations basal to tooth on outer margin (Fig. 13). Genital plate long, somewhat triangular, with a slight lateral expansion near base (Fig. 14). Pygofer nearly truncate with an evenly rounded apex (Fig. 15).

Female genitalia: seventh sternum wider than long, posterior margin greatly excavated between pointed lateral angles, median slightly produced with three small teeth (Fig. 41).

Holotype male: Venezuela, S. de Luna, 1,200

m, May 1983, Gadou Leg. Allotype female: Venezuela, El Dorado, Bolivar, km 86, 26 February 1979, Gadou Leg. Paratype female: Venezuela, Salto Para, R. Caura, Bolivar, 25 November 1978, Gadou Leg. Holotype and allotype in the University of Central Venezuela Collection, and paratype in the University of Kentucky Collection.

The male of this species is quite distinct from the other species of this genus on the basis of the genital structures. The females are associated by the same color pattern and coming from the same area.

Fuminana abana new species

(Figs. 10, 16-20, 43)

Length of male 12.5 mm; female 14.5 mm.

Similar to *falcifera*, only slightly smaller. Crown broadly rounded to face, more than 3 times as wide and median length.

Color similar to *falcifera* except slightly lighter brown.

Male genitalia: aedeagus tubular, without apical processes, apex lightly sclerotized and somewhat expanded (Figs. 16, 17). Style slender, curved laterad, with a subapical tooth on outer margin (Fig. 18). Genital plate long, triangular, nearly pointed at apex (Fig. 19). Pygofer robust, evenly rounded at apex.

Female genitalia: seventh sternum wider than long, posterior margin concavely excavated between rounded lateral angles, median with a U-shaped emargination (Fig. 43).

Holotype male: Venezuela, El Bochinche, Res. Forestal Imataca, Bolivar, 200 m, 6-13 December 1974, Expedicion Instituto Zoologia Agricola, Fac. Agronomia, U.C.V. Allotype female: Same data as holotype. Both types in the University of Central Venezuela Collection.

This species is easily separated by both male and female genital structures from other species known to occur in Venezuela.

Fuminana extata new species

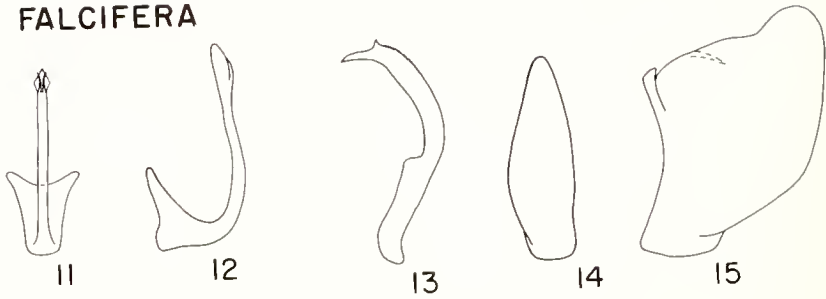
(Figs. 21-25)

Length of males 12.5-12.9 mm; female unknown.

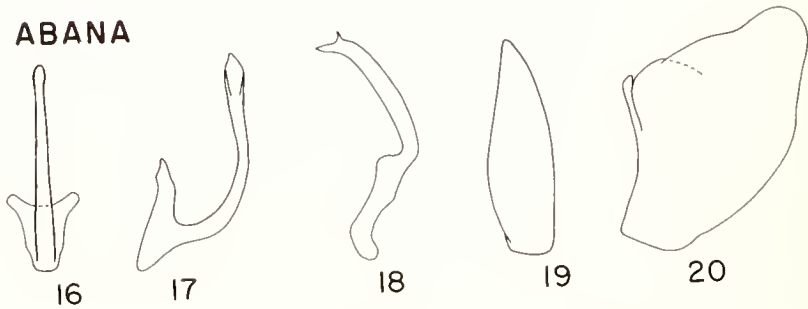
Similar to *falcifera* in overall size and color.

Male genitalia: aedeagus tubular, apical half laterally compressed, a pair of subapical lateral processes which extend slightly beyond apex (Figs. 21, 22). Style slender, curved laterally, large serrations apically and smaller serrations

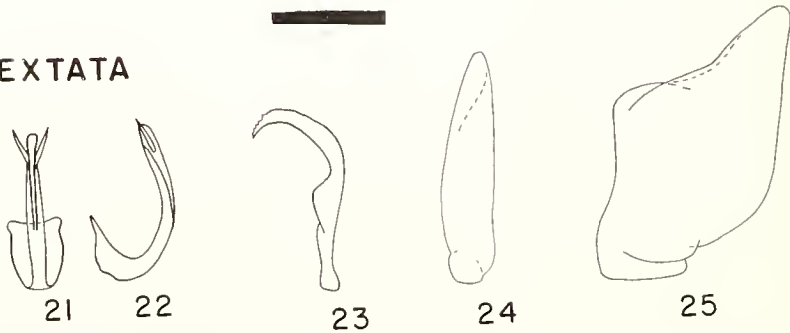
FALCIFERA



ABANA



EXTATA



FIGS. 11-25. Male genitalia. *Fuminana falcifera* n. sp., holotype: 11. Ventral view of aedeagus. 12. Lateral view of aedeagus. 13. Ventrolateral view of style. 14. Ventral view of genital plate. 15. Lateral view of pygofer. *Fuminana abana* n. sp., holotype: 16. Ventral view of aedeagus. 17. Lateral view of aedeagus. 18. Ventrolateral view of style. 19. Ventral view of genital plate. 20. Lateral view of pygofer. *Fuminana extata* n. sp., holotype: 21. Ventral view of aedeagus. 22. Lateral view of aedeagus. 23. Ventrolateral view of style. 24. Ventral view of genital plate. 25. Lateral view of pygofer. All drawn to the same scale, line equals 1 mm.

subapically on outer margin, without subapical tooth (Fig. 23). Genital plate long nearly parallel sided, bluntly pointed at apex (Fig. 24). Pygofer narrowing to a bluntly pointed apex (Fig. 25).

Holotype male: Venezuela, El Playón, Rio Ceura, Bolivar, 23 November 1978, A. Chacón Col. Paratype male: Venezuela, Rio Surukum, Carretera Sta. Elena Icabara, Bolivar, 850 m, 19-31 January 1985, F. Fernandez Y., Anibal Chacón and Jurg Demarmels Cols. Both types

in the University of Central Venezuela Collection.

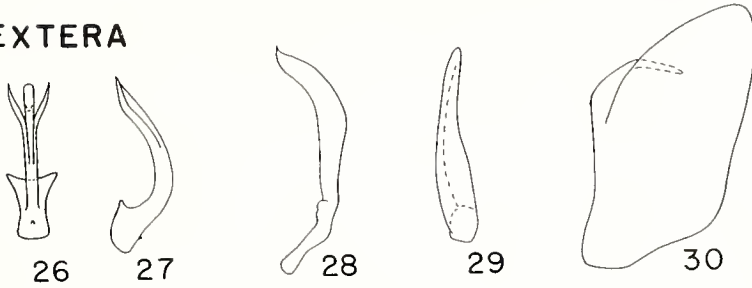
This species can be separated from other members of the genus by the laterally compressed apical end of the male aedeagus.

Fuminana sp.
(Fig. 42)

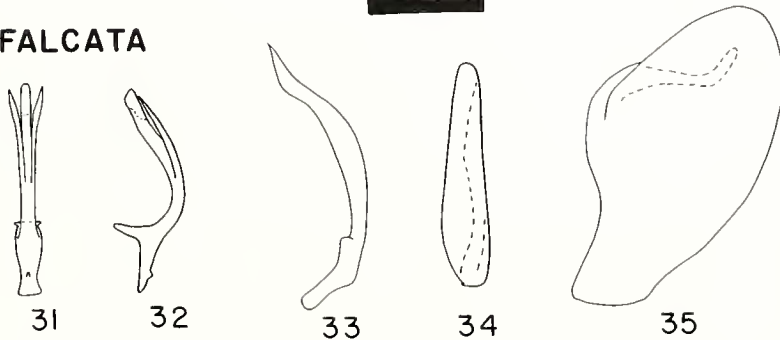
Length of females 15-16 mm.

Three female specimens are on hand which cannot be placed with certainty with any one

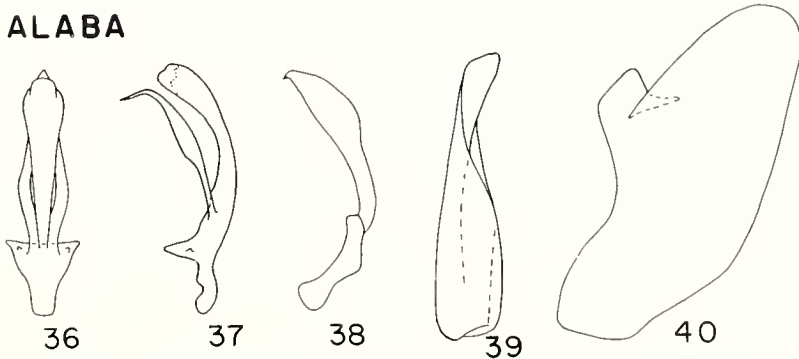
EXTERA



FALCATA



ALABA



FIGS. 26-40. Male genitalia. *Barbatana extera* n. sp., holotype: 26. Ventral view of aedeagus. 27. Lateral view of aedeagus. 28. Ventrolateral view of style. 29. Ventral view of genital plate. 30. Lateral view of pygofer. *Barbatana falcata* n. sp., holotype: 31. Ventral view of aedeagus. 32. Lateral view of aedeagus. 33. Ventrolateral view of style. 34. Ventral view of genital plate. 35. Lateral view of pygofer. *Barbatana alaba* n. sp., holotype: 36. Ventral view of aedeagus. 37. Lateral view of aedeagus. 38. Ventrolateral view of style. 39. Ventral view of genital plate. 40. Lateral view of pygofer. All drawn to the same scale, line equals 1 mm.

of the described species. These are all from the state of Bolivar, Venezuela and in the University of Central Venezuela Collection. All 3 have the same genitalic structure (Fig. 42). Since several other species are already known from nearby areas these may represent the female of one of these species, or these may represent a new species. Further collecting in this area should ultimately resolve the placement of this female.

Genus *Villosana* new genus

Head with a distinct margin which is up-turned medially (Figs. 4, 5). Pronotum wider than head, convexly rounded. Forewing with regular venation as in *Fuminana*. Body overall robust. Hind tibia with outer row of setae made up of only primary setae. Color dark brown to black, with only obscure markings. Male genitalia with pygofer without processes; plates

long, clothed with fine hair-like setae; style with large spine on ventral medial margin; aedeagus short, tubular.

Type species: *Clinonaria crina* DeLong and Freytag.

This genus is only known from the type species, which has a very striking anterior margin to the head. It is the darkest brownish black of any group in the *Scaris* complex. This genus shares with the next genus 2 characters, the mass of hair-like setae on the genital plate and the largest spot (difficult to see) before the first crossvein of the forewing.

Villosana crina (DeLong and Freytag)
new combination
(Fig. 44)

Clinonaria crina DeLong and Freytag, 1969: 156

Length of male 13.5 mm; female 16 mm.

This species was known only from one male from Guyana. A female from Venezuela can now be added and described.

Female genitalia: seventh sternum wider than long, posterior margin excavated between rounded lateral angles, median with V-shaped emargination (Fig. 44).

Specimen seen: Venezuela, S. de Luna, 1,200 m, May 1983, Gadou Leg., in the University of Central Venezuela Collection.

Genus *Barbatana* new genus

Head with a slight margin, crown twice as wide as median length (Figs. 7, 8). Pronotum wider than head, convexly rounded. Forewing with normal venation, similar to *Fuminana*. Body robust. Hind tibia with outer row of setae made up of only primary setae. Color brown to dark brown, with some small creamy spots in cells of forewing. Largest spot being before the first crossvein. Male genitalia usually with a simple pygofer with at most a small process between it and anal tube; plates long with a mass of long hair-like setae; style usually knife-like; aedeagus with a pair of lateral processes.

Type species: *Clinonaria lecta* DeLong and Freytag.

This genus looks much like the genus *Fuminana* in overall appearance, but has the largest spot on the forewing basad of the first crossvein. This difference and the large mass of hairs on the male genital plates, which is

missing in *Fuminana*, will easily separate these 2 genera.

Species of *Barbatana*

alaba n. sp. Venezuela.

cirra (DeLong and Freytag), 1969:158 (*Clinonaria*). French Guiana, Guyana, Venezuela. New combination.

confusa (DeLong and Freytag), 1969:160 (*Clinonaria*). Peru. New combination.

extera n. sp. Venezuela.

falcata n. sp. Venezuela.

lecta (DeLong and Freytag), 1969:162 (*Clinonaria*). Brazil, Colombia. New combination.

narda (DeLong and Freytag), 1969:164 (*Clinonaria*). Ecuador, Peru. New combination.

notha (DeLong and Freytag), 1969:160 (*Clinonaria*). Peru. New combination.

sagula (DeLong and Freytag), 1969:160 (*Clinonaria*). Bolivia. New combination.

Barbatana extera new species

(Figs. 26-30, 46)

Length of male 13.4 mm; female 14.5 mm.

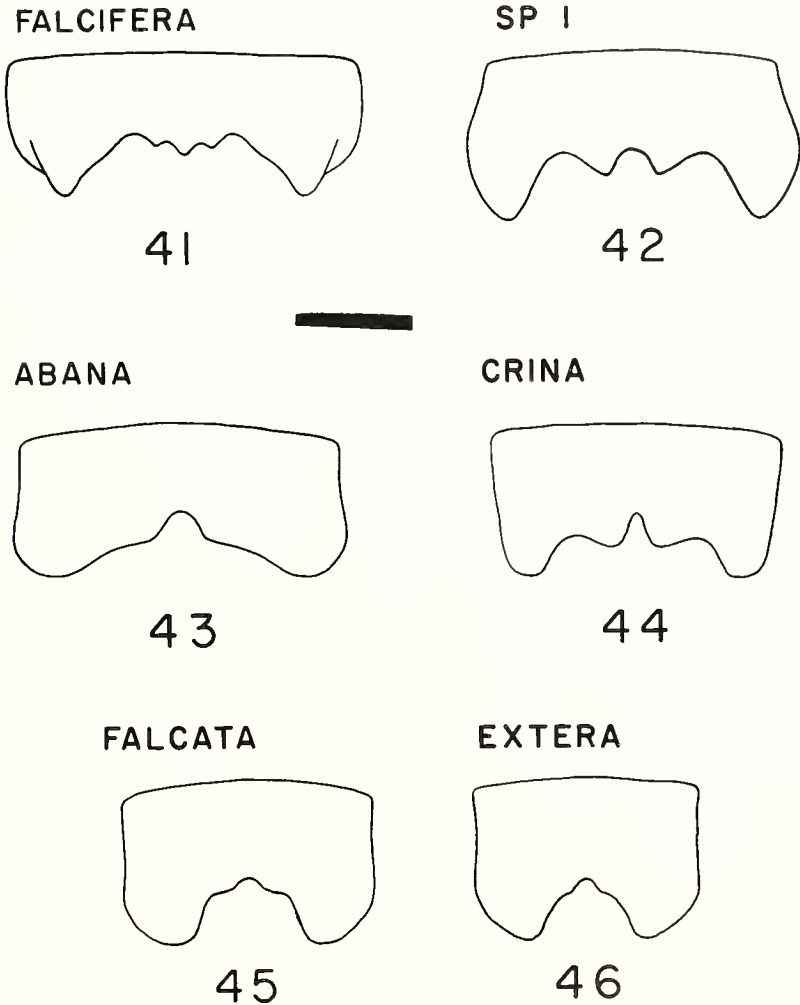
Similar to *cirra* in general size and shape. Crown similar to *falcata* with slight anterior margin, over twice as wide between eyes as median length.

Overall color brown, with some lighter and darker markings. Crown mostly brown, with at most a small yellow spot behind each ocellus. Pronotum yellow, lateral third with light brown punctures, median two thirds heavily punctured with dark brown. Forewings brown, with indistinct small creamy yellow spots, largest spot just basal to first crossvein.

Male genitalia: aedeagus tubular, with pair of lateral processes, length of shaft and flaring laterad (Figs. 26, 27). Style blade-like, widest near middle, curving dorsad, with pointed apex (Fig. 28). Genital plate long, narrow, thickened along lateral margin (Fig. 29), lateral margin covered with a brush of long hair-like setae. Pygofer truncate, rounded at apex, with a small dorsal process between pygofer and anal tube (Fig. 30).

Female genitalia: seventh sternum nearly same length as width, posterior margin rounded with a large U-shaped median emargination (Fig. 46).

Holotype male: Venezuela, El Pao, Bolivar, 27 December 1974, Gadou Leg. Allotype fe-



FIGS. 41-46. Female seventh sternum. 41. *Fuminana falcifera* n. sp., allotype. 42. *Fuminana* sp. from Venezuela. 43. *Fuminana abana* n. sp., allotype. 44. *Villosana crina* (DeLong and Freytag), from Venezuela. 45. *Barbatana falcata* n. sp., allotype. 46. *Barbatana extera* n. sp., allotype. All drawn to the same scale, line equals 1 mm

male: Venezuela, Akurinam, Rio Caroni, Bolivar, 5°20'N, November 1940, P. Anduze Leg. Both types in the University of Central Venezuela Collection.

This species can be separated from the known species of this genus by the processes of the male aedeagus flaring laterad.

Barbatana falcata new species
(Figs. 7-9, 31-35, 45)

Length of male 13 mm; female 14.5 mm.

Similar to *extera* in size and shape, head and pronotum as in Figures 7-9. Color dark brown.

Differs from *extera* in both male and female genitalia.

Male genitalia: aedeagus tubular, with a pair of lateral processes, just shorter than shaft (Figs. 31, 32). Style blade-like, narrowed at two thirds length (Fig. 33). Genital plate long, narrow, greatly thickened along lateral margin (Fig. 34), with a large brush of hair-like setae. Pygofer greatly rounded at apex, with a process between pygofer and anal tube (Fig. 35).

Female genitalia: seventh sternum slightly wider than long, posterior margin rounded with a large truncate emargination (Fig. 45).

Holotype male: Venezuela, Sn. Pedro de Ca-

taniapo, T. F. Amazonas, 100 m, 23-27 August 1981, En la Luz, J. L. Gareia Col. Allotype female: Same data as holotype. Both types in the University of Central Venezuela Collection.

The genitalia of this species are closest to *cirra*, but the male style narrows and recurves beyond middle, which does not occur in *cirra*, and the female seventh sternum has the median of the emargination of the posterior margin U-shaped, which is V-shaped in *cirra*.

Barbatana alaba new species
(Figs. 36-40)

Length of male 14.8 mm; female unknown.

Similar to *extera*, except larger and darker brown; male genitalia closer to *narda*.

Male genitalia: aedeagus tubular, with apical third of shaft expanded and bulbular; lateral processes extend dorsal to shaft, thin, wider in middle and pointed at apex (Figs. 36, 37). Style bulbous, expanded from near middle to near hooked apex (Fig. 38). Genital plate long, twisted from near middle to apex (Fig. 39), with a large brush of hair-like setae along

lateral margin. Pygofer long and broadly rounded apically (Fig. 40).

Holotype male: Venezuela, Kanarakumi, Bolivar, 450 m, 31 January 1967, F. Fernandez Y. and A. D. Ascoli Cols., in the University of Central Venezuela Collection.

This species is closely related to *narda*, and can be separated by the style being hooked apically and the processes of the aedeagus being wider medially.

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